

during rapid rotation, are always in the same direction as those derived from the slowest rotation, and which continue to act after the rotation has ceased, but are greater in intensity; and that the former effects are such as might have been looked for from a knowledge of the latter.

*Some Account of the Transit Instrument made by Mr. Dollond, and lately put up at the Cambridge Observatory. Communicated April 13, 1825. By Robert Woodhouse, A.M. F.R.S. Read May 19, 1825. [Phil. Trans. 1825, p. 418.]*

The author in this paper first describes the operations by which the new transit instrument at the Observatory of Cambridge was approximatively placed, so as to allow of a meridian mark being erected on the distant steeple of Granchester church. He then enters into a more full consideration of the different methods proposed and employed by astronomers for executing the more delicate adjustments of the transit in general; he shows how the errors of collimation, level, azimuth, and the clock, may all be detected, and their values determined, by the resolution of certain equations of the first degree, constructed from observations of any three or more stars; but this method, though exact in theory, he reprobates in practice, and prefers making each adjustment separately and by the ordinary mechanical trials, as shorter, more effectual, and less troublesome. Mr. Woodhouse then describes a remarkable phenomenon presented to him by the transit in the course of his observations. He found that the line of collimation of the instrument deviated occasionally to the east or west of the centre of the meridian mark, without any apparent reason. At length, however, it was found that this was caused by the approach of the assistant's body to the lateral braces, placed for the purpose of steadying the instrument in an invariable position at right angles to its axis. The expansion of the brace nearest to him was found to thrust the axis of the telescope aside; and on the removal of the assistant, the equilibrium of temperature restoring itself, the deviation gradually disappeared. That this was the true cause, appeared by wrapping hot cloths round the alternate braces, by which the same effect was produced in an increased degree. Warned by these observations, Mr. Woodhouse ordered a proper apparatus to be provided, to defend the braces from the sun's rays, during the meridian passage of that luminary.

*On the fossil Elk of Ireland. By Thomas Weaver, Esq. Member of the Royal Irish Academy, of the Royal Dublin Society, and of the Wernerian and Geological Societies. Read May 19, 1825. [Phil. Trans. 1825, p. 429.]*

Mr. Weaver's principal object in this paper is to prove that the remains of the gigantic elk, which have been found in various parts of Ireland, are not of antediluvian origin, but that the animal lived

and flourished in the countries in which its remains are now found, at a period of time which, in the history of the earth, may be considered only as modern ; and that the extinction of the species is attributable rather to the continued persecution it endured from its enemies, accelerated by incidental local causes, than to any general catastrophe that overwhelmed the surface of the globe.

The spot examined by the author containing these remains, is near the village of Dundrum, in Down : it appears formerly to have been a lake, and is now covered with peat lying upon a bed of marl. The bones are invariably found between these two substances, and from the examination of the shells contained in the latter, it appears that they are exclusively fresh-water species.

The peat bog of Rathcannon, in the county of Limerick, has also furnished abundance of the same bones, similarly situated. These were examined by the Rev. Mr. Maunsell before they were displaced. Some of them showed marks of disease and fractures, and in one case the rib was singularly perforated, as if by a sharp instrument. Marrow, having the appearance of fresh suet, was found in the cavity of one shank-bone, and they appeared generally to contain all the principles found in fresh bones.

These and some other concurrent circumstances seem, says the author, to remove all idea of the remains of the Irish elk being of any other than comparatively recent origin ; and in seeking for a cause of the nearly constant distribution of these remains in Ireland in swampy spots, he conjectures that the animal may have often sought the waters and the marshy land as a place of refuge from its enemies, and thus not unfrequently found a grave where it looked for protection.

*Microscopical Observations on the Materials of the Brain, and of the Ova of Animals, to show the analogy that exists between them. By Sir Everard Home, Bart. V.P.R.S. Read at the Society for promoting Animal Chemistry, April 12, 1825. Read at the Royal Society June 3, 1822. [Phil. Trans. 1825, p. 436.]*

The author first details the results of some experiments made with a view to ascertain whether frogs, that had been completely frozen, could, under any circumstances, be restored to life, which he found never to be the case when the brain had been entirely congealed, the substance of which, after such process, never regains its former appearance, but is dissolved into a watery fluid, mixed with some gelatinous matter. In the act of freezing, the human brain was found to suffer a similar decomposition ; the molecule of a pullet's egg is also resolved during the process of freezing into materials corresponding with those of the brain, and the testicular secretion was found to be similarly constituted, and in no instance to contain animalcules, as Leuwenhoek and other more recent authors have affirmed. Magnified drawings, executed by Mr. Bauer, of the various substances described in this paper, accompany the communication.